



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,352	06/15/2008	Atila Benito Pimenta Rodrigues	DC10051 PCT 1	5577
137	7590	02/03/2011	EXAMINER	
DOW CORNING CORPORATION CO1232 2200 W. SALZBURG ROAD P.O. BOX 994 MIDLAND, MI 48686-0994				NGUYEN, HUNG D
ART UNIT		PAPER NUMBER		
3742				
			NOTIFICATION DATE	DELIVERY MODE
			02/03/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[patents.admin@dowcorning.com](mailto:patents.admin@dowcorning.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/594,352	RODRIGUES, ATILA BENITO PIMENTA	
<b>Examiner</b>		<b>Art Unit</b>	
HUNG NGUYEN		3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 June 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 June 2008 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/26/2006</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: “reference 18”. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**screws**” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The abstract of the disclosure is objected to because the legal phraseology such as "means" or "**comprises**" or "comprising" often used in patent claims should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 12 provides for the “**use**” of a self baking electrode, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Zelinka (US Pat. 2,431,157) (newly cited).**

9. Regarding claim 1, Zelinka discloses an electron device and radiator comprising: a cylindrical casing (11); within the cylindrical casing are plurality of ribs (23) attached along the inner surface of the casing lengthwise of the cylindrical casing, wherein at least one of the ribs is made of a material comprising copper (Col. 2, Lines 7-8).

***Claim Rejections - 35 USC § 103***

**10.** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**11. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lopes de Albuquerque (US Pat. 6,625,196) (cited by applicant).**

**12.** Regarding claims 1 and 9, Lopes de Albuquerque discloses a container (1) made of aluminum and stainless steel for forming self-baking electrodes for use in low electric reduction furnaces comprising: a cylindrical casing (11); within cylindrical casing are a plurality of ribs (12) attached along the inner surface of the casing lengthwise of the cylindrical casing (11), wherein at least one of the ribs is made of a material comprising stainless steel. Lopes de Albuquerque does not disclose the rib is made of a material comprising copper. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Lopes de Albuquerque, to make the rib is made of a material comprising copper, for the purpose of having a material that have good electrical conductivity.

**13.** Regarding claim 2, Lopes de Albuquerque discloses the cylindrical casing (11) is made of a material comprising aluminum (Col. 4, Lines 33-34).

**14.** Regarding claims 3 and 6, Lopes de Albuquerque discloses each of the ribs (12) have circular holes (17) arranged alternately and offset from an axis that runs down the rib parallel to the inner surface of the cylindrical casing (11).

**15.** Regarding claim 4, Lopes de Albuquerque discloses each of the ribs (12) is attached to the casing (11) by means of screws (14).

**16.** Regarding claim 5, Lopes de Albuquerque discloses each of the ribs (12) is attached approximately perpendicularly to the inner surface of the casing (11).

**17.** Regarding claim 7, Lopes de Albuquerque discloses the container further comprises electrode paste (2).

**18.** Regarding claim 8, Lopes de Albuquerque discloses the casing (11) is split lengthwise into 2 halves (Col. 3, Lines 14-15).

**19.** Regarding claim 10, Lopes de Albuquerque discloses a method of forming an electrode comprising: adding unbaked electrode paste (2) to an electrode container (1) comprising a cylindrical casing (11) containing therein a plurality of ribs (12) attached along the inner surface of the casing lengthwise of the cylindrical casing (11), wherein at least one of the ribs is made of a material comprising stainless steel.; and heating the paste to form the electrode (Col. 4, Lines 17-29). Lopes de Albuquerque does not disclose the rib is made of a material comprising copper. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Lopes de Albuquerque, to make the rib is made of a material comprising copper, for the purpose of having a material that have good electrical conductivity.

20. Regarding claim 11, Lopes de Albuquerque discloses an electrode (5) produced by the method.

21. **Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goins et al. (US Pat. 4,865,643) in view of Lopes de Albuquerque (US Pat. 6,625,196) (both cited by applicant).**

22. Regarding claims 12-13, Goins et al. discloses a smelting process for making elemental silicon and alloys thereof comprising: introducing the electrode (27) into an electric reduction furnace containing silicon dioxide and carbonaceous reducing agent (Abstract); running electrical energy (28a) through the electrode until the desired silicon is produced. Goins et al. does not disclose a cylindrical casing containing therein a plurality of ribs attached along the inner surface of the easing lengthwise of the cylindrical casing, wherein at least one of the ribs is made of a material comprising copper. Lopes de Albuquerque discloses a cylindrical casing containing (11) therein a plurality of ribs (12) attached along the inner surface of the easing lengthwise of the cylindrical casing, wherein at least one of the ribs is made of a material comprising stainless steel. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Goins et al., a cylindrical casing containing therein a plurality of ribs attached along the inner surface of the easing lengthwise of the cylindrical casing, wherein at least one of the ribs is made of a material comprising stainless steel, for the purpose of making a self-bake electrode; the ribs is made of a material comprising copper, for the purpose of having a material that have good

electrical conductivity (Note: Applicant Admit Prior Art in Par. 28 that the process for manufacturing silicon is known in the art, including specifically reference Goins et al.).

**23. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goins et al. (US Pat. 4,865,643) in view of Lopes de Albuquerque (US Pat. 6,625,196) and further view of Ward et al. (US Pat. 4,500,724) (cited by applicant).**

**24.** Regarding claim 14, Goins/Lopes de Albuquerque disclose substantially all the features of the claimed invention as set forth above **except** producing silanes comprising reacting an alkylhalide with the silicon metal at an elevated temperature. Ward et al. discloses producing silanes comprising reacting an alkylhalide with the silicon metal at an elevated temperature (Abstract; Col. 3, Lines 51-56). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Goins/Lopes de Albuquerque, producing silanes comprising reacting an alkylhalide with the silicon metal at an elevated temperature, as taught by Ward et al., for the purpose of producing alkylhalosilanes (Note: Applicant Admit Prior Art in Par. 29 that the process for manufacturing silanes is known in the art, including specifically reference Ward et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG NGUYEN whose telephone number is (571)270-7828. The examiner can normally be reached on Monday-Friday, 9M-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG NGUYEN/  
Examiner, Art Unit 3742  
1/27/2011

/Quang T Van/  
Primary Examiner, Art Unit 3742